

ENVIRONMENTAL Fact Sheet



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Seasonal Water System Operation and Maintenance

This document provides an overview of actions needed to successfully operate a transient non-community public water system. Such a system is defined as one serving a population of at least 25 people, for at least 60 days per year. Examples include water systems serving campgrounds, restaurants and motels.

Preseason Start Up –

Open Early. There are many activities that will have to be completed before your water system is activated for the season. First, check records from last year and address any issues that were left incomplete. Steps taken now can go a long way in preventing water quality issues later.

Inspection. Walk the water system to inspect:

- The well head area to check for potential contamination sources, such as fuel storage, chemicals, pesticides, paints, septic system, etc.
- The well or pump house.
- The storage tank to check for holes, leaks and overall integrity.
- The distribution system by opening any manholes and observing any above ground visible portions of the system.
- Evidence of damage or vandalism.
- The integrity of the well cap or cover.
- The integrity of vent openings for tightness to prevent contamination from vermin and insects (see DES fact sheets “Dug Well Design” (WD-DWGB-1-4) and “Bedrock Well Design” (WD-DWGB-1-2) at www.des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm).

In addition ...

- Operate all valves, blow offs, fixtures, and sampling taps before the system is pressurized and make the necessary repairs.
- Where applicable, the interior of any atmospheric storage tanks should be brushed and sprayed down with a strong chlorine solution.

Pressurize System. Reconnect all the plumbing and pressurize the system. Flush lines to eliminate any sediment or stagnant water in the system.

If the system is without a meter, attach a pressure gauge to check for system leaks and make any necessary repairs.

Conduct a cross-connection survey:

- Ensure that all hose bibs are provided with vacuum breakers.
- If you have RV dump stations, ensure that potable water lines are isolated.

Disinfecting System. Complete preseason disinfection of the water system can be done following the step-by-step procedure found in DES fact sheet “Disinfecting Public Water Systems” (WD-DWGB-4-3) on DES’s webpage (see reference above). A proper dosage of chlorine is critical for the disinfection process to be effective. Having the ability to measure chlorine residual would be valuable. Inexpensive kits are available at your local pool or hardware store to determine chlorine residual. **Do not** flush the chlorinated water directly into a stream or pond; it is illegal to do so and it will kill aquatic life. Bacteria samples cannot be taken until all chlorine has been flushed out of the system.

Sampling. Water quality monitoring for seasonal water systems requires analyzing for bacteria, nitrate and nitrite. Bacteria samples are required for each quarter that the system is open; nitrate, once a year and nitrite, once every three years. The schedule for your water system can be found on the DES One Stop Data Retrieval Site at www.des.nh.gov/OneStopData.htm.

In Season Operation and Maintenance –

Stay on track with your sampling schedule and keep records of results, along with maintenance performed on the water system. If in season maintenance is performed, ensure that the responsible person for disinfecting the system is aware of his/her duties. We recommend keeping a calendar marked with sample dates, and post the calendar in a place that you and your assistants visit daily or routinely.

Staff should be aware of the importance of keeping potential contamination sources away from the well head area. Potential sources are listed above and include: fuel storage, chemicals, pesticides, paints, septic systems, trash or debris, etc. Informational signs should be posted in the wellhead area to prevent dumping or otherwise leaving contaminants in the area.

All personnel should be aware of necessary measures to prevent cross-connections. All hose bibs, vacuum breakers and backflow preventers must be properly installed. Responsible personnel should regularly inspect for “inline devices” that cross connect with the sewer lines, e.g., RV clean-out devices. The facility should establish bans preventing these devices without an approved reduced pressure zone device.

All personnel should be aware that a power outage can cause back flow. This is because the source pump will be Off while users may potentially continue to turn on faucets causing a negative pressure in the distribution system. The same negative pressure effect can occur if too many users are hooked up to a pipe that is not properly sized.

An up-to-date operation manual should be available to all staff, which should include an accurate sketch of the distribution system with locations of valves and blow offs.

An emergency response procedure must be in place to show actions to be taken and who to notify if the system becomes contaminated or other water issues occur.

Post-Season Shut Down –

- Drain the distribution system entirely and perform necessary maintenance and improvements.
- All exposed pumps and meters should be removed and stored to avoid freezing.
- All openings on the system should be capped or screened to prevent contamination.

For More Information

For additional information, please contact the Drinking Water and Groundwater Bureau at (603) 271-2513 or dwgbinfo@des.nh.gov or visit www.des.nh.gov, click on “A to Z LIST” and choose “Drinking Water and Groundwater Bureau”; all of the bureau’s fact sheets can be found under “Publications.”

Note: This fact sheet is accurate as of February 2010. Statutory or regulatory changes or the availability of additional information after this date may render this information inaccurate or incomplete.